

Appl. No. 09/711,587

Amendments to the Claims

Claim 1-77 (cancelled).

Claim 78 (previously presented): A cathode assembly comprising:

a substrate having a plurality of substantially conical emitter tips thereover, each of the conical emitter tips terminating in a pointed apex and having a tip portion sidewall and a frustum portion sidewall; and

material over the substrate and between at least two of the emitter tips, the material having an upper surface and edges contacting the frustum portion sidewall without contacting the tip portion sidewall, wherein the entirety of the upper surface is exposed.

Claim 79 (previously presented): The assembly of claim 78 wherein the material comprises silicon dioxide.

Claim 80 (previously presented): The assembly of claim 78 wherein the emitter tips comprise silicon.

Claim 81 (previously presented): The assembly of claim 80 wherein the emitter tips comprise conductively doped polysilicon.

Claim 82 (previously presented): The assembly of claim 80 wherein the emitter tips consist essentially of conductively doped polysilicon.

Claim 83 (previously presented): The assembly of claim 80 wherein the emitter tips comprise conductively doped silicon.

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Claim 84 (previously presented): The assembly of claim 80 wherein the emitter tips consist essentially of conductively doped silicon.